THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT M. CASE

Appeal No. 96-1729
Application 08/165,795[1]

ON BRIEF

Before THOMAS, HAIRSTON, and BARRETT, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellant has appealed to the Board from the examiner's final rejection of claims 1 through 11, which constitute all of the claims in the application.

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[1] Application for patent filed December 13, 1993.

Representative claim 1 is reproduced below:

1. A method for reproducing an image which comprises the steps of:

(a) converting an image to a multi-bit pixel depth bitmap;

(b) defining a first multi-pixel cell having particular dimensional attributes from said bitmap, said cell containing a desired number of pixels and each pixel bearing a value representative of a shade of gray;

(c) determining a gray level for the first multi-pixel cell;

(d) dividing the first multi-pixel cell into two equal groups of alternating pixels with a first one of said groups being on and a second of said groups being off; and

(e) deriving a first derivation cell depicting a maximum apparent gray from said first multi-pixel cell having said two equal groups of alternating pixels.

The following references are relied on by the examiner:

Stoffel	4,194,221	Mar. 18, 1980
Chen et al. (Chen)	4,668,995	May 26, 1987
Roetling	4,730,221	Mar. 8, 1988
Roe	5,121,223	Jun. 9, 1992
Tai	5,258,850	Nov. 2, 1993

Claims 5 through 8 stand rejected under the enablement provision of 35 U.S.C. § 112, first paragraph. The same

claims also stand rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite. Claims 1 through 11 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Roetling in view of Tai (as a newly stated ground of rejection in the answer) as to claims 1 through 4 and 9 through 11, with the addition of Chen or Stoffel or Roe as to claims 5 through 8.[2]

Rather than repeat the positions of the appellant and the examiner, reference is made to the briefs and the answer for the respective details thereof.

OPINION

We reverse each of the four stated rejections.

Turning first to the rejection of claims 5 through 8 under the enablement provision of the first paragraph of 35 U.S.C.
§ 112, appellant correctly sets the standard of review, that being a determination as to whether only routine or undue experimentation must be necessary by an artisan to make and

[2] At page 14 of the initial examiner's answer, the examiner has withdrawn his separate rejection of claim 8 under the first paragraph written description portion of 35 U.S.C. § 112.

use the claimed invention.

The detailed description of the invention begins at the bottom of page 13 of the specification as filed. The description of Figure 3 is taken in the context of each of cells C1 and C2 being defined with side lengths of N pixels where N is a number divisible by two; see the bottom of page 14. The discussion at page 15 is in the context of comparing the actual versus the total possible gray levels of the multi-bit pixel depth primary cell C. This sets forth the environment of dependent claim 5, a more particular recitation of the comparing step of independent claim 4. The artisan, in reading the description at pages 15 and 16 of the specification as filed, clearly would have understood without any measure of undue experimentation necessary to make and use the claimed invention, the subject matter of independent claim 5. The formula recited in this claim is explained in detail in the portion of the specification at pages 15 and 16. The discussion at the bottom of page 16 gives an example of the numerical determinations of the compare operations which eventually would yield the value V to be assigned to the gray level to be depicted in a subsequent single-bit (as opposed to

a multi-bit) multi-pixel cell. Moreover, as to the integer determination in dependent claim 6, it is clear that this discussion would have been readily understood by the artisan as explained at pages 17 and 18 of the specification as filed. It is the deriving step at the end of independent claim 4 that is further explained according to the formula recited in dependent claim 6 which is consistent with this just mentioned discussion.

In view of the foregoing, we conclude that it would have been necessary for the artisan to exercise only a routine measure of experimentation to make and use the claimed invention as set forth in dependent claims 5 through 8. Additionally, since the subject matter of these claims is directly consistent with and somewhat mirrors the actual language of the disclosure in the earlier noted portions of the specification as filed, appellant’s claims can not be fairly said to be indefinite. It is apparent to us that the appellant is particularly pointing out and distinctly claiming what he regards as his invention as required by the second paragraph of 35 U.S.C. § 112 such as to give adequate notice to the artisan and the public what the metes and bounds of the

claimed invention comprise. Therefore, we reverse the outstanding rejections of claims 5 through 8 under the first and second paragraphs of 35 U.S.C. § 112.

Turning lastly to the rejections of claims 1 through 11 under 35 U.S.C. § 103, we reverse both of the above stated rejections. Each of independent claims 1, 4 and 9 on appeal recite at a minimum the following:

> [D]ividing the first multi-pixel cell into two equal groups of alternating pixels with a first one of said groups being on and a second of said groups being off.

Our study of the combined teachings of Roetling and Tai leads us to agree with appellant's observations at pages 5 and 6 of the reply brief which we reproduce here:

> Roetling fails to discuss dividing a cell made up of a number of pixels into two equal groups of alternating pixels with the first on and the second off. The newly cited U.S. patent to Tai does not overcome the deficiencies of Roetling. Tai uses a method entirely different from Roetling and entirely different from Appellant to reproduce an original image (reply brief, page 5).
>
> Nowhere does Tai suggest that he uses a template which consists of pixels which alternate between black and white pixels. Tai clearly says that each of the pixels has a gray level and in fact determines the gray level for each pixel. Further, any template that Tai generates is modified using

> one of the aforementioned dot techniques. Tai does not turn on or turn off pixels in the manner taught by Appellant. It is submitted that there is nothing in Tai which would motivate one of ordinary skill in the art to select a template with alternating pixels instead of alternating regions. It is further submitted that there is nothing which would suggest to one of ordinary skill in the art that Tai should be combined with Roetling. (reply brief, page 6)

If we assume for the sake of argument that the teachings of Roetling and Tai would have been combinable within 35 U.S.C. § 103, the above noted provision of each independent claims 1, 4 and 9 on appeal that we quoted earlier at a minimum would not have been taught or suggested in any manner. As such, we do not agree with the examiner's view that Tai teaches the examiner's admitted deficiencies in Roetling with respect to each of these independent claims of dividing a cell into two equal groups of alternating pixels as recited in the earlier quoted clause. In this sense then as well, there is essentially no prima facie case of obviousness that the applied prior art would have been established to lead us to conclude the subject matter of independent claims 1, 4 and 9 would have been obvious to the artisan. As such, we further reverse the rejection of the respective dependent claims of

each of these independent claims including those encompassed by the separate stated rejection under 35 U.S.C. § 103 of claims 5 through 8.

In view of the foregoing, we have reversed the rejections of claims 5 through 8 under the first and second paragraphs of 35 U.S.C. § 112. We have also reversed the rejections of claims 1

through 11 under 35 U.S.C. § 103. Therefore, the decision of the examiner rejecting all the claims on appeal is reversed.

REVERSED

James D. Thomas Administrative Patent Judge	)	
Kenneth W. Hairston Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
Lee E. Barrett Administrative Patent Judge	)	

tdc

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